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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,022	03/19/2004	Tomoko Taguchi	008312-0308844	8904

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EXAMINER

BLOUIN, MARK S

ART UNIT	PAPER NUMBER
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2627

DATE MAILED: 09/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/804,022

Applicant(s)

TAGUCHI, TOMOKO

Examiner

Mark Blouin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date See Continuation Sheet.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :3/19/04,12/28/04,8/23/05,11/04/05,3/28/06.

Detailed Action

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishida et al (US 2001/0017746) in view of Mallery (US 5,311,387).

3. Regarding Claims 1,2,6, and 7, Nishida et al shows (Fig. 8 – all structures are labeled) a magnetic disc apparatus, comprising: a double layered perpendicular recording medium (Fig. 10) comprising a soft magnetic underlayer and a perpendicular recording layer, which are formed on a substrate; and a perpendicular magnetic recording head comprising a main pole configured to generate a recording magnetic field in a perpendicular direction, and an auxiliary pole connected to the main pole on a leading and trailing side to the main pole, but does not show the auxiliary pole having a multilayered structure in which a nonmagnetic layer is sandwiched between magnetic layers, and a write shield arranged apart from the main pole on a trailing side to the main pole and having a multilayered structure in which a nonmagnetic layer is sandwiched between magnetic layers.

Mallery shows (Figs. 1 and 2) the auxiliary pole having a multilayered structure (Fig. 1a) in which a nonmagnetic layer (Aluminum Oxide) is sandwiched between magnetic layers (NiFeCo), and a write shield (Fig. 2 P3 – write/shield) arranged apart from the main pole on a

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trailing side to the main pole and having a multilayered structure in which a nonmagnetic layer is sandwiched between magnetic layers.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the auxiliary pole/shield structure of Nishida et al with the with the multi-layered structure as shown by Mallary. The rationale is as follows: One of ordinary skill in the art at the time the invention was made would have been motivated to replace the auxiliary pole/shield structure of Nishida et al with the with the multi-layered structure as shown by Mallary in order to improve signal sensitivity and reproduction quality.

4. Regarding Claims 3 and 8, Mallary shows (Fig.3) the magnetic disc apparatus according to, wherein the write shield has such a thickness that is thicker in each of edge portions than in a central portion (P/A and P/B sit on top of P/A creating thicker edges).

5. Regarding Claims 4 and 9, Mallary shows (Fig. 3) the magnetic disc apparatus according to, wherein the write shield has such a number of stacks of the magnetic layer and the nonmagnetic layer that is larger in each of edge portions than in a central portion (P/A and P/B sit on top of P/A creating thicker edges).

6. Regarding Claims 5 and 10, Mallary shows (Fig. 1a) the magnetic disc apparatus according to, wherein the auxiliary pole has a multilayered structure in which a nonmagnetic layer is sandwiched between magnetic layers.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Blouin whose telephone number is 571-272-7583. The examiner can normally be reached on M-F from 6:00 to 3:30 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Hoa Nguyen, can be reached on 571-272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Mark Blouin', with a long horizontal flourish extending to the right.

Mark Blouin
Patent Examiner
Art Unit 2627
September 7, 2006